

the arms, the resources providing an output for delivering and maintaining a selected energy at an arm.

Please add new claim as follows:

Sub B11
2 --47. An ablation treatment apparatus, comprising:
3 a multiple antenna device including a primary antenna with a longitudinal axis, and a
4 secondary antenna coupled to the primary antenna and configured to be deployed at least
5 partially in a lateral direction relative to the longitudinal axis, wherein the secondary antenna
6 is configured to be less structurally rigid than the primary antenna and the primary and
7 secondary antennas are configured to provide a selectable geometric ablation of a selected
8 tissue mass;
9 an insulation sleeve positioned on an exterior of the primary antenna;
10 an energy source; and
one or more cables coupling the energy source to the multiple antenna device.

REMARKS

Independent claim 1 has been amended to clarify that the secondary antenna is coupled to the primary antenna and is advanced in a lateral direction relative to a longitudinal axis of the primary antenna. The coupling of the secondary antenna to the primary antenna, and the lateral advancement of the secondary antenna defines an ablation volume. In claim 31, the secondary arm is coupled to the primary arm and is advanced in a lateral direction relative to a longitudinal axis of the primary antenna. The coupling of the secondary arm to the primary arm defines a selectable ablation volume.

New claim 47 includes an energy source to the apparatus of claim 1.

Claim 1 of the present invention is an ablation treatment apparatus. The apparatus comprises a multiple antenna device including a primary antenna with a longitudinal axis, and a secondary antenna coupled to the primary antenna and configured to be deployed at least partially in a lateral direction relative to the longitudinal axis. The secondary antenna is configured to be less structurally rigid than the primary antenna.

Claim 1 is distinguished from U.S. Patent No. 5,507,743 (hereafter the "'743 Patent"), assigned to the same assignee as the present application.

The '743 Patent is an RF treatment apparatus that includes an RF indifferent electrode with a compacted, non-deployed state, and an expanded deployed state. The RF indifferent electrode forms a helical structure with one or more coils in the deployed state that surround

an exterior of a tumor. The RF treatment apparatus also includes an RF active electrode that is introduced at least partially into the tumor. Both the indifferent and the active electrode as advanced out of an introducer. This is contrasted with the device of claim 1 of the present invention where there is no separate introducer. In claim 1 of the present invention the secondary electrode is coupled to the primary electrode and advanced in a direction away from the longitudinal direction of the primary electrode. There is no need for a separate introducer. Additionally, in claim 1 of the present invention, the primary and secondary antennas are both active. In the '743 Patent one of the electrodes is active and the other is passive.

The present invention is also distinguished from U.S. Patent No. 5,366,490 (hereafter the "'490 Patent"). In the '490 Patent one or more electrodes are advanced from a catheter through the urethra and into prostate tissue. These electrodes do not define a selectable ablation. If the electrodes of the '490 Patent created a desired geometric ablation that was defined by the electrodes then the result would be ablation of the urethra. The electrodes of the '490 Patent are not configured to create a desired geometric ablation zone because if they were so configured that the urethra would be destroyed. The '490 Patent is further distinguished from the present invention in that the secondary antenna is coupled to the primary antenna and thus eliminates the need for the catheter of the '490 patent. Instead, the primary antenna of the present invention serves the dual function of being an introducer and also being an electrode.

CONCLUSION

It is submitted that the present application is in form for allowance, and such action is respectfully requested.

Respectfully submitted,

WILSON SONSINI GOODRICH & ROSATI

Date: 7/2/96

By: 

Paul Davis, Reg. No. 29,294
Registration No.

650 Page Mill Road
Palo Alto, California 94304
Telephone: (415) 493-9300